$\lambda_1, \lambda_2,...\lambda_n$

IN 102

FILTER

λ_i

OUT 1   104

$\lambda_1,...\lambda_{i-1},...\lambda_{i+1},...\lambda_n$

OUT 2   106

100

FIG. 1A
(PRIOR ART)

OUT1   114

IN 112

OUT2   116

110

FIG. 1B
(PRIOR ART)

OUT 2   126

IN 122

OUT1   124

120

FIG. 1C
(PRIOR ART)

$\lambda_1, \lambda_2, ... \lambda_n$
202

λ_1 204-1

λ_2 204-2

λ_n 204-n

200

FIG. 2A
(PRIOR ART)

$\lambda_1, \lambda_2, ... \lambda_n$
212

λ_1 214-1

λ_2 214-2

λ_n 214-n

210

FIG. 2B
(PRIOR ART)

λ_1 224-1

λ_2 224-2

λ_n 224-n

$\lambda_1, \lambda_2, ... \lambda_n$
222

220

FIG. 2C
(PRIOR ART)

INTERLEAVER

IN 302
$\lambda_1, \lambda_2, \ldots \lambda_n$

$\lambda_1, \lambda_3, \ldots \lambda_{n-1}$
OUT1   304

$\lambda_2, \lambda_4, \ldots \lambda_n$
OUT2   306

300

FIG. 3A
(PRIOR ART)

OUT 1

λ_1 λ_3 λ_5

λ

OUT 2

λ_2 λ_4 λ_6

λ

FIG. 3B
(PRIOR ART)

320

325

322
329

324

327

321

50%R/50%T
323

329

326

FIG. 3C
(PRIOR ART)

332
334
330
339
50%R
50%T
333
335
339
331
336

FIG. 3D
(PRIOR ART)

340
345
342
343
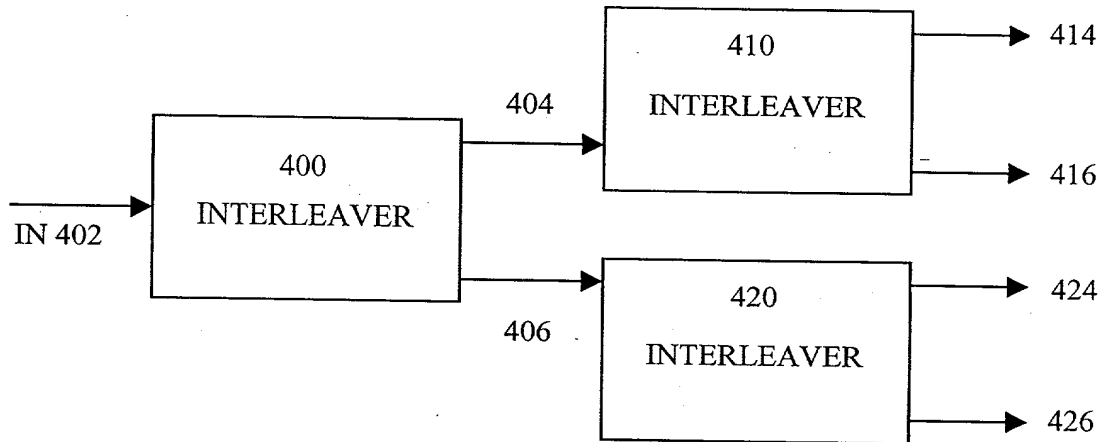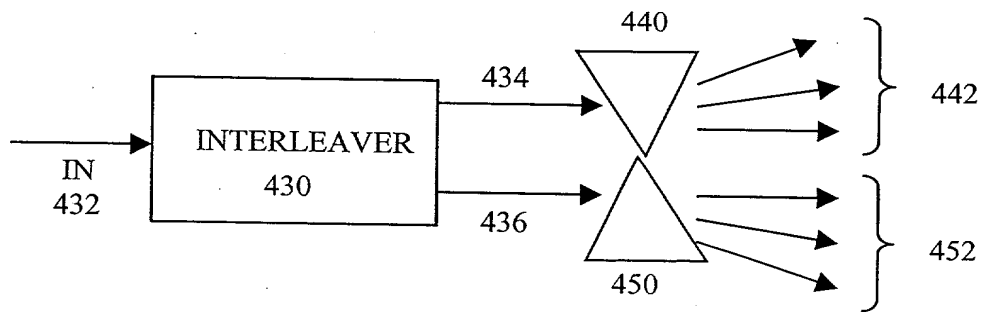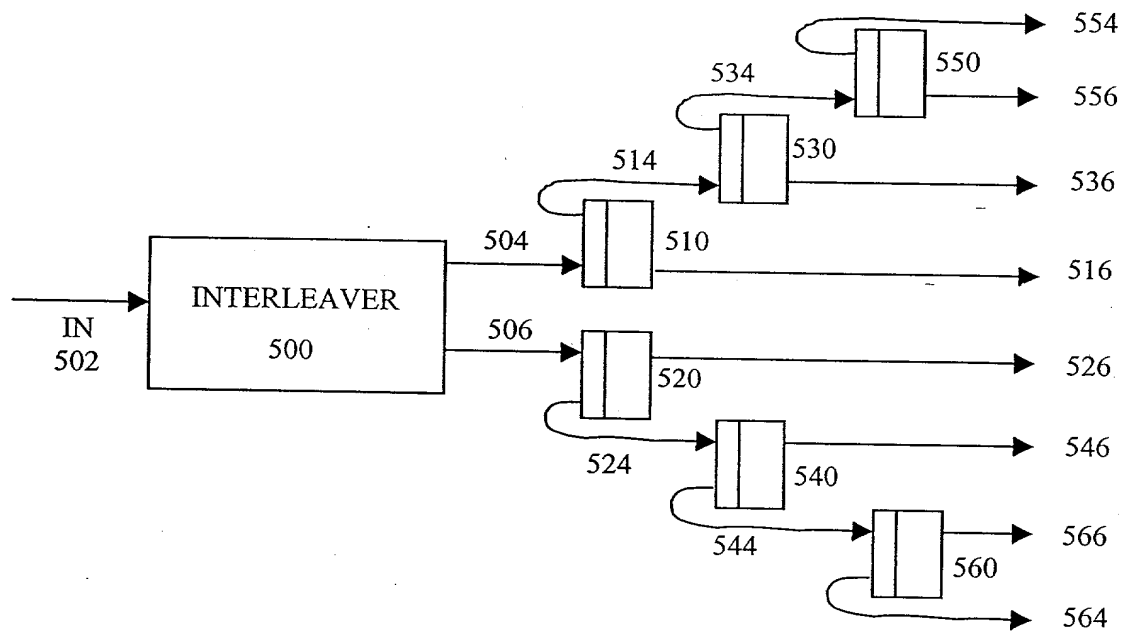343
342
346
347

FIG. 3E
(PRIOR ART)

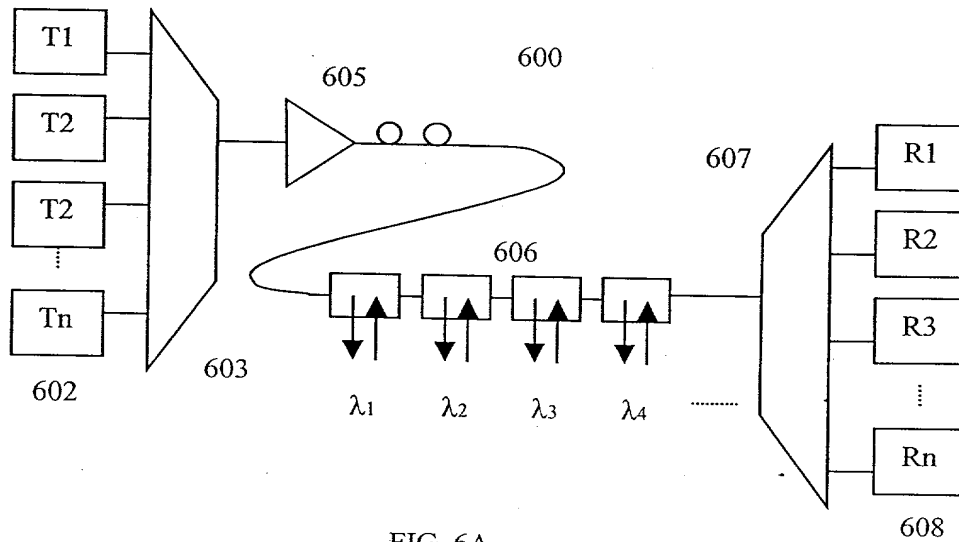FIG. 4A
(PRIOR ART)

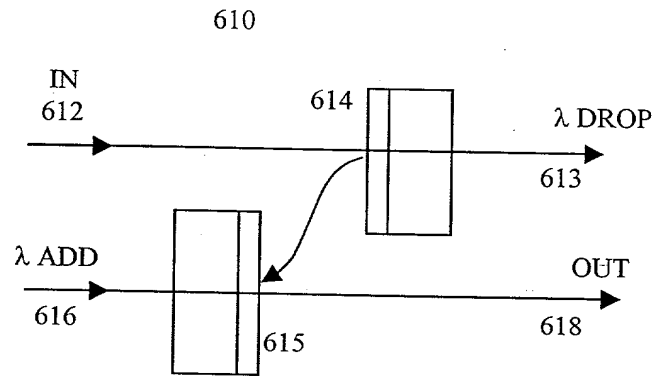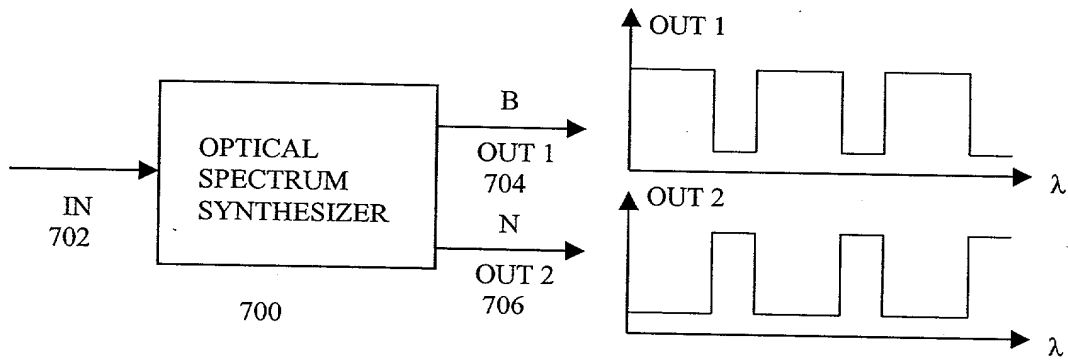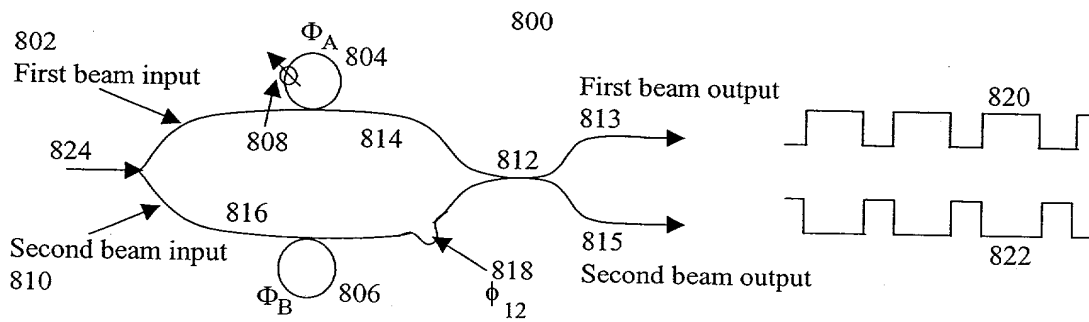FIG. 4B
(PRIOR ART)

FIG. 5
(PRIOR ART)

FIG. 6A
(PRIOR ART)

610

IN
612   614   λ DROP
                          613

λ ADD   OUT
616   615   618

FIG. 6B
(PRIOR ART)

IN
702

OPTICAL
SPECTRUM
SYNTHESIZER

B
OUT 1
704

N
OUT 2
706

700

FIG. 7A

OUT 1

OUT 2

λ

λ

FIG. 7B

800

802
First beam input

Φ_A 804

824

808   814   812

First beam output
813

820

816

Second beam input
810

Φ_B 806   818
ϕ_{12}

815
Second beam output

822

Fig. 8A

800'

Φ_A

802'

804'

824'

808'   814'

816'   812'

810'

809   806'

Φ_B

813'

812'

815'

818'
ϕ_{12}

820'

822'

Fig. 8B

800"

Φ_A
804"

804"

824"

814"

816"   812"

810"

811   806"

Φ_B

813"

815"

818"
ϕ_{12}

820"

822"

Fig. 8C

900

IN

905

902-1

903
50% R
50% T

902-2

907

OUT 1
909

OUT 2
911

FIG. 9A

900'

IN1
917-1

905'

OUT 1
909'

902-1'

903'
50% R
50% T

902-2'

IN2
917-2

OUT 2
911'

907'

FIG. 9B

FIG. 9C

1000

1012

IN 1
1016

1008

OUT 1
1020

3-dB
1004

3-dB
1006

IN 2
1018

1002

1010

OUT 2
1022

1014

FIG. 10

1100

1112

1108-1'   1116   1108-2'

1120   1124

1108-1

1104
3 dB

1108-2

1106
3 dB

1110-1   1110-2

1122   1126

1102

1118

1114

FIG. 11

1216   1220

1212   1208-2   1208-2

1230

1206

1208-1   1228

1214   1204

1210-2

1210-1   1232

1218   1222   1210-1   1226

FIG. 12

1300

FIG. 13

1400

SPECTRUM EXCHANGER

FIG. 14

FIG. 15

FIG. 16A

FIG. 16B

FIG. 17A
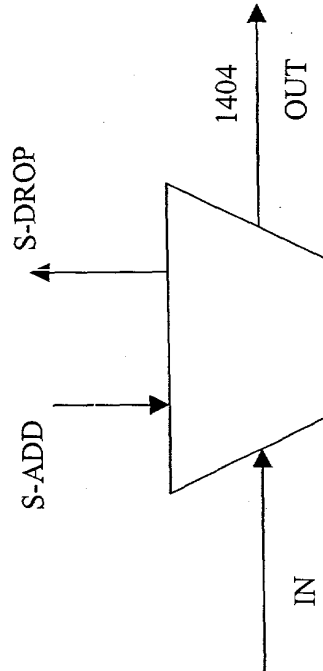

FIG. 17B
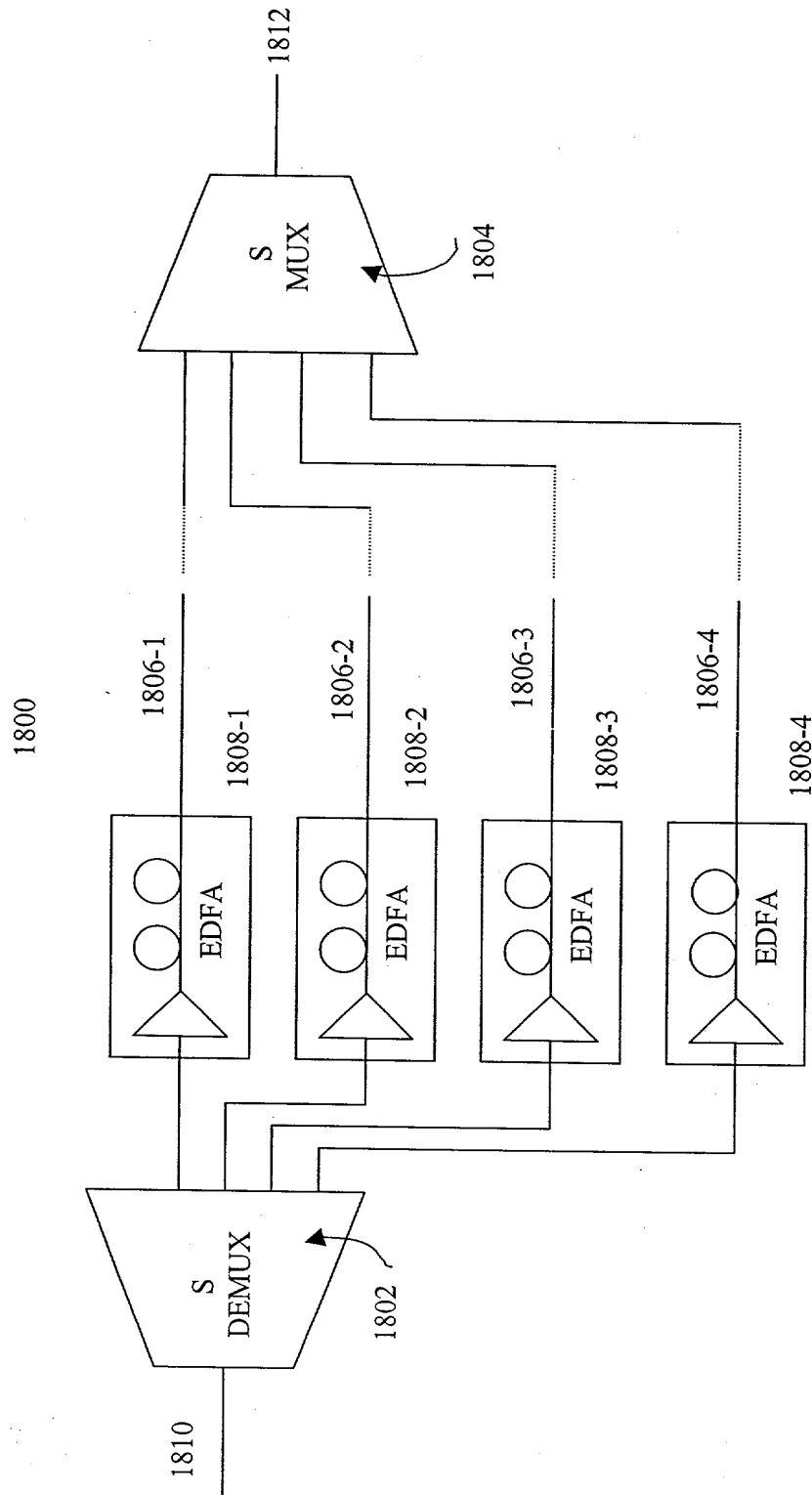
FIG. 18

SPECTRUM ADD-DROP MODUALE 1900

FIG. 19A

FIG. 19B

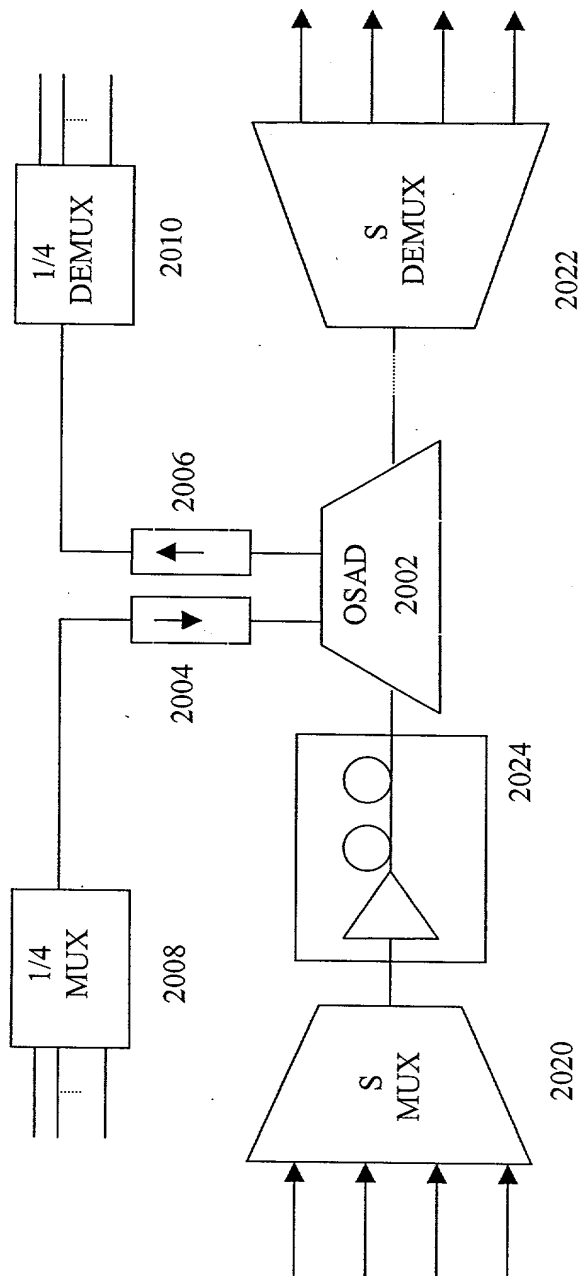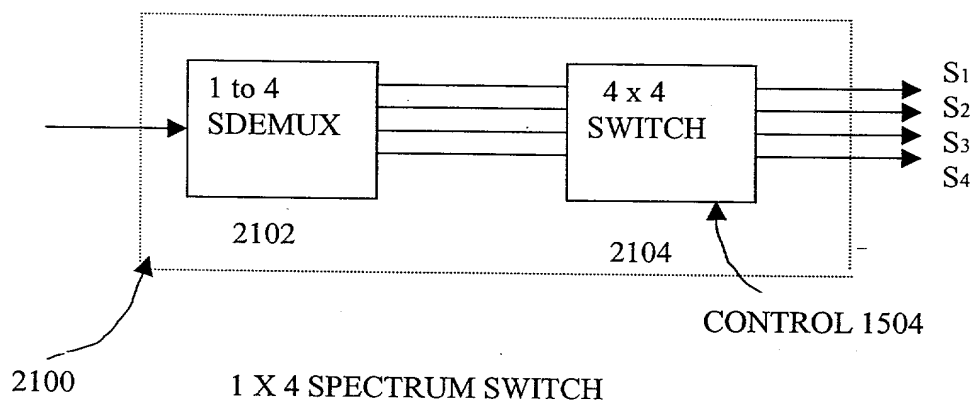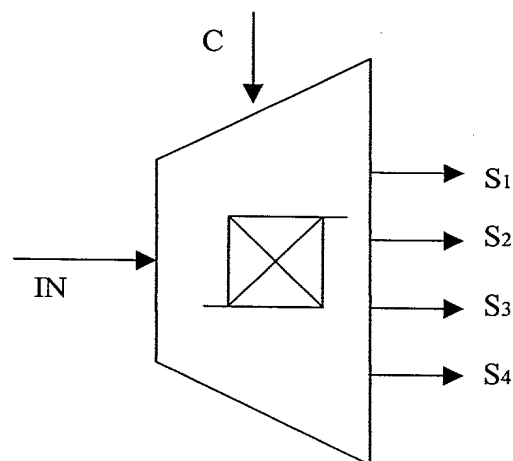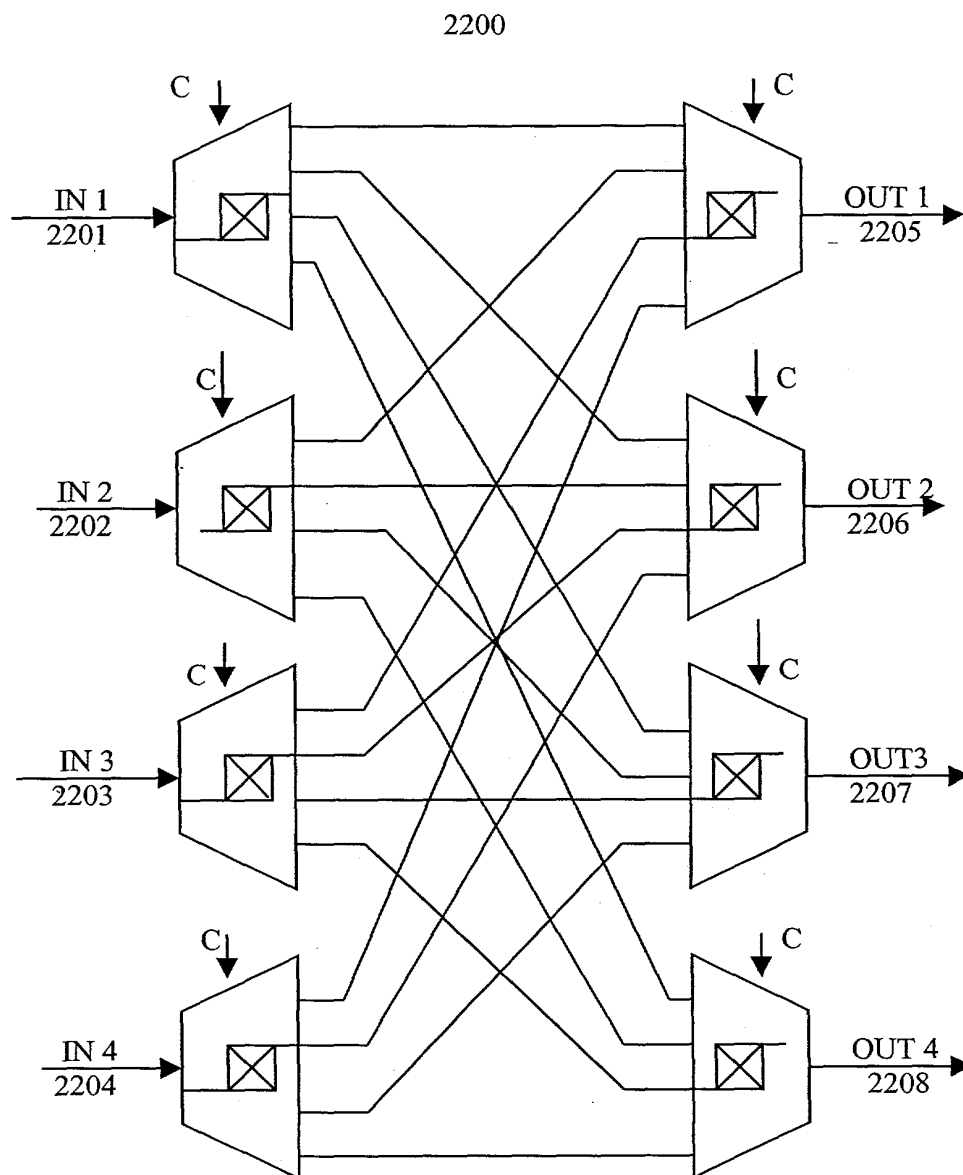FIG. 20

1 X 4 SPECTRUM SWITCH
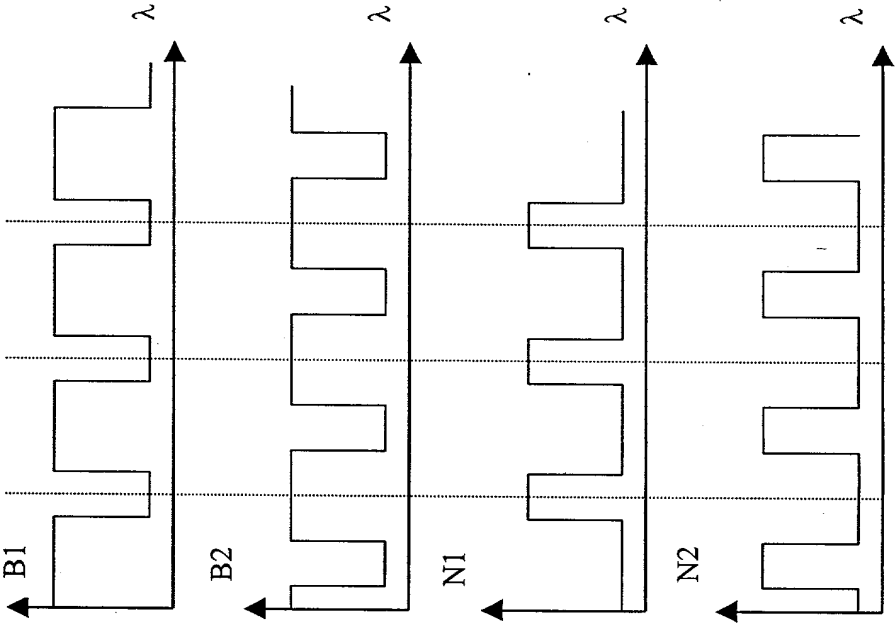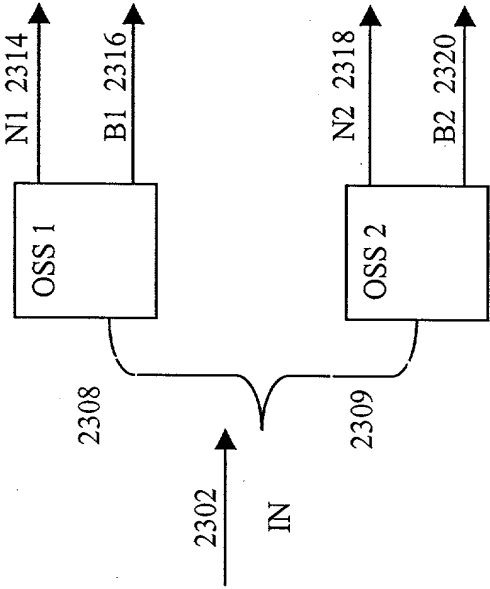
FIG. 21A

FIG. 21B

2200
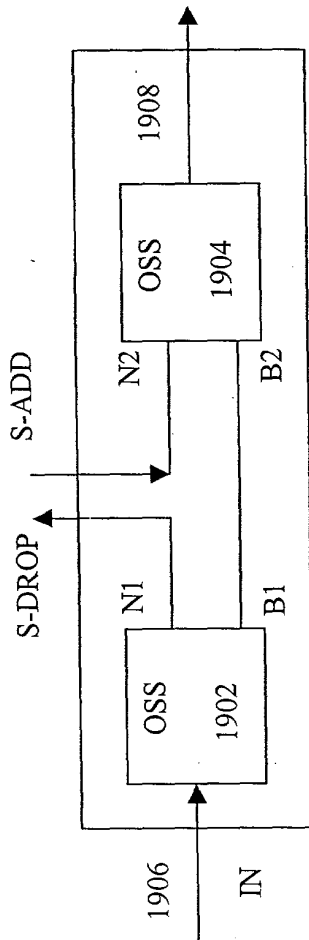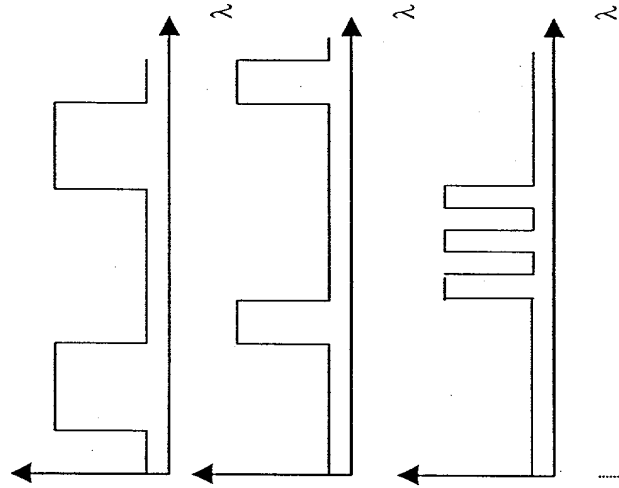

4x4x4 SPECTRUM CROSS-CONNECT
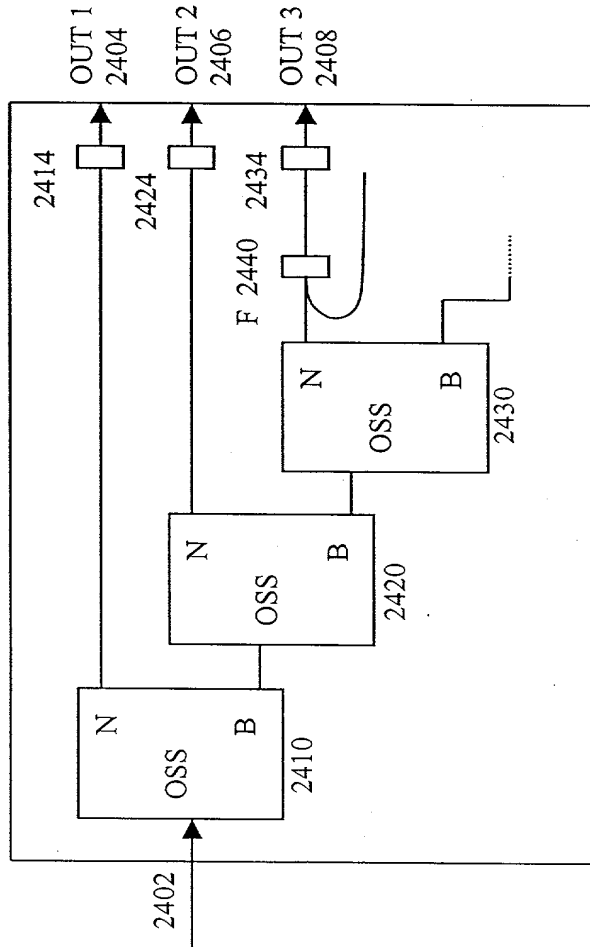
FIG. 22

FIG. 23B

FIG. 23A

FIG. 24B

FIG. 24A